

ABSTRACT OF THE DISCLOSURE

The output of a transmitting voltage-controlled oscillator generated in an offset PLL is used as a signal source for a variable frequency input side of an image removing mixer for generating a local oscillation signal for GSM/DCS reception. A signal obtained by dividing an IF frequency generated by a transmission intermediate frequency (IF) PLL used for the offset PLL for generating a transmission frequency signal is employed for the other input of the image removing mixer. A desired frequency is thereby generated before the mixers of a demodulator.